Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A connector module being a component mounted on a circuit board, comprising:

at least one jack adapted for coupling to a link; and

circuitry coupled to the jack and embedded into the connector module, the circuitry configured to perform Power-over-Ethernet (PoE) operations by supplying power through the jack.

2. (Original) The connector module of claim 1 being an Ethernet jack module with the embedded circuitry with PoE functionality and the jack being an Ethernet jack.

3. (Cancelled)

4. (Withdrawn) The connector module of claim 1, wherein the circuitry comprises:

a FET switch;

an AC disconnect component coupled to the FET switch;

magnetics coupled to the AC disconnect component; and

a PoE circuit coupled to the FET switch, the PoE circuit to vary the amount of power supplied over the jack by adjusting current supplied to the FET switch.

5. (Withdrawn) The connector module of claim 4, wherein the PoE circuit is coupled to the AC disconnect component in order to discontinue power supplied to the jack when the link is disconnected from the jack.

6. (Withdrawn) The connector module of claim 4, wherein the AC disconnect is coupled to (i) center taps of magnetics and (ii) a power supply to receive a direct current (DC) supply voltage therefrom.

7. (Withdrawn) The connector module of claim 4, wherein the circuitry further comprises one or more light emitting diodes being in a first state when the link is disconnected from the jack and in a second state when the link is coupled to the jack.

8. (Withdrawn) The connector module of claim 5, wherein the one or more light emitting diodes of the circuitry being in a third state upon detecting a fault in an electrical connection established by the link when the link is coupled to the jack.

9. (Withdrawn) The connector module of claim 4, wherein the one or more light emitting diodes of the circuitry being in a blinking state during communications between the connector module and a peripheral device and in a no light state when the communications have stopped.

10. (Withdrawn) The connector module of claim 4, wherein the magnetics comprises a pair of transformers each having a center tap coupled to the AC disconnect.

11. (Previously Presented) The connector module of claim 1 being implemented on the circuit board within a switching device including a housing substantially enclosing the connector module with at least the jack accessible from a side of the housing for coupling to the link.

12. (Previously Presented) The connector module of claim 2 being adapted within a switching device to receive direct current (DC) voltage from an externally located power supply and, under control of the circuitry embedded within the connector module, to transmit power from the at least one Ethernet jack of the connector module.

13. (Withdrawn) The connector module of claim 11, wherein the circuitry further comprises at least one opto-coupler to isolate a common voltage and digital ground for one or more control signals supported by the circuitry.

14. (Withdrawn) The connector module of claim 1, wherein the circuitry comprises

a plurality of PoE functional blocks each including a light emitting diode, an Ethernet jack and magnetics; and

at least one shift register coupled to the light emitting diodes for each of the PoE functional blocks, the at least one shift register to drive the light emitting diodes.

15. (Previously Presented) A connector module being a component mounted on a circuit board placed in a switching device, comprising:

a plurality of Ethernet jacks positioned along a side of the switching device, each adapted for coupling to a link; and

circuitry embedded within the component, coupled to the plurality of Ethernet jacks, to perform Power-over-Ethernet (PoE) operations by supplying power through each of the plurality of Ethernet jacks, the circuitry comprises a filtering circuitry and a PoE circuit, the PoE circuit to vary the amount of power supplied over any of the plurality of Ethernet jacks.

16. (Cancelled)

17. (Withdrawn) The connector module of claim 15, wherein the circuitry further comprises an AC disconnect component coupled to the PoE circuit and the magnetics, the AC disconnect to discontinue a supply of power to one of the plurality of Ethernet jacks when the jack is decoupled from a link and to provide an indication that may alter a state of a light emitting diode corresponding to the one of the plurality of Ethernet jacks.

18. (Previously Presented) The connector module of claim 15, wherein the PoE circuit of the circuitry is coupled to the filtering circuitry.

19. (Cancelled)

20. (Cancelled)

21-23. (Cancelled)

24. (Withdrawn) A method comprising:

receiving an isolated supply voltage by a connector module that comprises a Power-over-Ethernet (PoE) circuit and a plurality of jacks;

internally regulating an isolated internal voltage being less than the isolated supply voltage within the connector module;

performing PoE operations within the connector module to manage power transmissions by the PoE circuit; and

supplying power through at least one of the plurality of jacks to a neighboring connector module.

25. (Previously Presented) A switching device including a connector module being a component mounted on a circuit board implemented within the switching device, the switching device comprising:

a housing; and

a connector module being a component mounted on a circuit board, the component including at least one jack formed in the housing and power-over-Ethernet (PoE) circuitry embedded within the component and directly coupled to the at least one jack.

26. (Previously Presented) The switching device of claim 25 wherein the connector module is an Ethernet jack module.

27. (Previously Presented) The switching device of claim 25, wherein the housing further includes an output to supply power to a first connector module neighboring the connector module.

28. (Previously Presented) The switching device of claim 27, wherein the housing further includes an input to receive power from a second connector module neighboring the connector module so as to form a cascading connection between the first neighboring connector module and the second neighboring connector module.

29. (Withdrawn) The connector module of claim 25, wherein the PoE circuitry includes (i) a switch and (ii) a PoE circuit adapted to vary the amount of power supplied over the at least one jack by adjusting current supplied to the switch.

30. (Withdrawn) The connector module of claim 29, wherein the PoE circuitry further comprises an alternating current (AC) disconnect component coupled to the switch, the AC disconnect component to disconnect power supplied to the at least one jack when a link is disconnected from the at least one jack.

31. (Withdrawn) The connector module of claim 30, wherein the PoE circuitry further comprises magnetics including a pair of transformers each having a center tap coupled to the AC disconnect component.

32. (Previously Presented) The switching device of claim 25, wherein the housing comprises (i) a first input adapted to receive power from a first neighboring connector module and (ii) a first output adapted to provide power to a second neighboring connector module.

33. (Previously Presented) The switching device of claim 32, wherein the housing further comprises a cascade serial communication interface adapted for coupling to a serial communication interface of the first neighboring connector module.

34. (Withdrawn) The connector module of claim 25, wherein the housing further comprises a connector enabling a connection directly to an isolated voltage source via a mating connector/cable assembly.